UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,280	04/02/2001	Kenichiro Yamauchi	MTS-3246US	9237

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EXAMINER
FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/824,280	YAMAUCHI ET AL.
	Examiner	Art Unit	
	James A. Fletcher	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>29 June 2004</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-10 and 13-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-10 and 13-18</u> is/are rejected.

7) ☒ Claim(s) <u>19 and 20</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>29 June 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Please include the new Art Unit 2616 in the caption or heading of any written or facsimile communication submitted after this Office Action because the examiner, who was assigned to Art Unit 2615, will be assigned to new Art Unit 2616. Your cooperation in this matter will assist in the timely processing of the submission and is appreciated by the Office.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a) because they fail to show specific packets as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In particular, Fig. 2 appears to illustrate the claimed feature of changing the time between packets after an overflow condition is noted. However, the figure does not explicitly note that the boxes under the numbers "14" and "15" are packets, and that those boxes represent the same packets under different conditions. The examiner suggests labeling each box with an identifier such as P_1 through P_6, and including such details in the specification without adding new matter, and noting that the increased time shown after event 16 meets the equation noted in the specification. Further, all numbered items should have a text designation.

Response to Arguments

3.   Applicant's arguments filed 29 June 2004 have been fully considered but they are not persuasive.

In re page 8, applicant's representative states: "Ottesen, however, does not disclose or suggest a controller for adjusting the interval between packets belonging to each frame. The examiner respectfully disagrees.

Taken as a whole, Ottesen clearly discloses a controller for the adjustment of time intervals between packets belonging to each frame. Between Col 17, line 64 and Col 18, line 4, Ottesen says "the distribution switch 42...preferably transmits each packet of discrete video segments 48 to a target set-top control system 62 within a predetermined transmission window, the duration of which is preferably determined by the configuration and functional attributes of a particular customer's set-top control

system 62." Ottesen goes further to disclose, in Col 42, lines 2-7, "the duration of the

transmission window, within which each of the program segment packets is transmitted

to a particular set-top control system 62, is preferably computed by the server

controller," and notes in lines 12-1 "each packet typically being transmitted to the

communication channel 44 during each transmission window." Finally, Ottesen notes in

Col 15, lines 24-28 "It may be advantageously efficient, for example, for the multimedia

server 30 to transmit two packets during a single transmission window to a particular

set-top control system 62..." Clearly, Ottesen anticipates the control of the delay

between packets, not only by controlling the size of the transmission window, but by

controlling the number of packets transmitted within the transmission window.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   Claims 1-4, 6-8, and 10-16 are rejected under 35 U.S.C. 102(b) as being

anticipated by Ottesen et al (5,721,815).

Regarding claim 1, Ottesen et al disclose a transfer rate controller

compromising:

- means of inputting a picture or sound stream (Col 14, lines 58-62 "an input

  buffer typically provided in a subscribing customer's set-top control system 62

for the purpose of buffering packets of video segments 48 received from the multimedia server 30");

- means of controlling a transfer rate of the stream by adjusting an interval between packets respectively belonging to each frame of the input stream (Col 21, lines 25-31 "The set-top controller...communicates...to regulate the rate at which the compressed video signal stream is received from the multimedia server");

- means of outputting the stream output from the packet rate adjusting means (figs 4 and 11, item 44 "Communication Channel").

Regarding claim 2, Ottesen et al disclose a transfer rate controller wherein the packet rate adjusting means changes the frame rate (Col 21, lines 6-8 "Moving outside of the presentation control window will generally require retransmission of previously transmitted compressed video segments").

Regarding claim 3, Ottesen et al disclose a transfer rate controller wherein the packet rate adjusting means makes no change in the frame rate (Col 21, lines 1-5 "As long as the viewer operates within the...presentation control window 90, each of the 7,200 compressed video segments 48 comprising the two-hour movie is transmitted only once").

Regarding claim 4, Ottesen et al disclose a transfer rate controller wherein the stream has a plurality of multiplexed data (Col 8, lines 62-65 "A typical multiplexed bitstream comprises a video signal stream portion, an audio signal stream portion, and may further include other information signal stream portions").

Regarding claim 6, Ottesen et al disclose a transfer rate controller wherein the stream is an MPEG transport stream (Col 7, lines 10-15 "The multimedia information transmitted from the multimedia server 30 to a plurality of set-top control systems 62 is preferably transmitted in a digitally compressed format. A compression algorithm standard suitable for use by the novel media-on-demand communication system is one developed by the Moving Pictures Experts Group, and is generally referred to as an MPEG coding standard") and the packet is a transport packet (Col 9, lines 4-7 "The discrete source program segments that comprise the subscriber-selected multimedia program bitstreams are preferably transmitted as packets of segments").

Regarding claim 7, Ottesen et al disclose a transfer rate controller wherein the packet rate adjusting means controls a transfer rate according to a warning indicative that an overflow is likely to occur in a buffer of a decoder (Col 21, lines 25-33 "The set-top controller 64 preferably communicates control signals to the multimedia server 30 over a server control line or channel 78 of the communication channel 44 to...regulate the rate at which the compressed video signal stream is received from the multimedia server 30 over the data channel 75 to avoid an input buffer 66 overflow condition").

Regarding claim 8, Ottesen et al disclose a transfer system comprising:

- a transfer rate controller (Col 21, lines 25-31 "The set-top controller...communicates...to regulate the rate at which the compressed video signal stream is received from the multimedia server")

- a buffer for temporarily storing an inputted stream (Fig 11, item 66 "Input Buffer"); and

- decoding means of inputting the stream from the buffer and decoding and outputting the stream (Fig 11, item 74 "Decoder").

- means of monitoring a free space of the buffer and issuing a warning to the transfer rate controller if an overflow is likely to occur in the buffer (Col 21, lines 25-33 "The set-top controller 64 preferably communicates control signals to the multimedia server 30 over a server control line or channel 78 of the communication channel 44 to...regulate the rate at which the compressed video signal stream is received from the multimedia server 30 over the data channel 75 to avoid an input buffer 66 overflow condition").

Regarding claim 10, Ottesen et al disclose an information aggregate comprising a program and/or data for allowing a computer to carry out all or some functions of all or some means of the transfer rate controller or the decoding system (Col 19, lines 57-61 "The set-top control system 62 preferably includes a set-top controller 64 that communicates with an input buffer 66, output buffer 72, and a decoder 74 to coordinate decoding of the received coded video signal stream 46 for presentation on a local monitor or television").

Regarding claim 13, Ottesen et al disclose a method of transferring a data stream from a reproducing device to a decoder, comprising the steps of:

- transmitting over a transmission medium, to the decoder from the reproducing device, the data stream (Col 5, line 65 - Col 6, line 2 "a multimedia communication system...configured to communicate multimedia programs to

a plurality of set-top control systems concurrently over a communications channel");

- receiving over the transmission medium, from the reproducing device, the data stream (Col 6, lines 2-6 "the multimedia server30 transmits a video program...as a customized series of compressed digital source program segments to a subscribing customer's set-top control system", at a predetermined data transfer rate (Col 13, lines 35-38 "the multimedia server 30 preferably asynchronously transmits approximately ten megabytes of multimedia program information each minute to some 600 subscribing customer locations");

- storing the received data stream in a temporary buffer (Col 14, lines 58-60 "an input buffer typically provided in a subscribing customer's set top control system");

- monitoring, within the decoder, a data overflow condition in the buffer;

- transmitting, from the decoder to the reproducing device, a warning signal indicating the data overflow condition; and

- adjusting, within the reproducing device, the data transfer rate of the data stream from the reproducing device to the decoder, by adjusting an interval between packets respectively belonging to each frame (Col 21, lines 25-31 "The set-top controller...communicates...to regulate the rate at which the compressed video signal stream is received from the multimedia server") whereby the decoder receives the data stream at a reduced data transfer rate

to prevent buffer overflow (Col 21, lines 25-33 "The set-top controller 64 preferably communicates control signals to the multimedia server 30 over a server control line or channel 78 of the communication channel 44 to...regulate the rate at which the compressed video signal stream is received from the multimedia server 30 over the data channel 75 to avoid an input buffer 66 overflow condition").

Regarding claim 14, a method of transferring a data stream in which transmitting and receiving the data stream includes transmitting and receiving an MPEG data stream (Col 7, lines 10-15 "The multimedia information transmitted from the multimedia server 30 to a plurality of set-top control systems 62 is preferably transmitted in a digitally compressed format. A compression algorithm standard suitable for use by the novel media-on-demand communication system is one developed by the Moving Pictures Experts Group, and is generally referred to as an MPEG coding standard").

Regarding claim 15, a method of transferring a data stream in which the steps of receiving and transmitting includes, respectively, receiving the data stream and transmitting the warning signal between the reproducing device, which is housed in one unit, and the decoder, which is housed in a separate unit (Col 21, lines 25-33 "The set-top controller 64 preferably communicates control signals to the multimedia server 30 over a server control line or channel 78 of the communication channel 44 to...regulate the rate at which the compressed video signal stream is received from the multimedia server 30 over the data channel 75 to avoid an input buffer 66 overflow condition").

Regarding claim 16, a method of transferring a data stream in which the step of receiving includes receiving MPEG transport packets and the step of adjusting includes adjusting an interval between each transport packet (Col 7, lines 10-15 "The multimedia information transmitted from the multimedia server 30 to a plurality of set-top control systems 62 is preferably transmitted in a digitally compressed format. A compression algorithm standard suitable for use by the novel media-on-demand communication system is one developed by the Moving Pictures Experts Group, and is generally referred to as an MPEG coding standard" and Col 21, lines 25-33 "The set-top controller 64 preferably communicates control signals to the multimedia server 30 over a server control line or channel 78 of the communication channel 44 to...regulate the rate at which the compressed video signal stream is received from the multimedia server 30 over the data channel 75 to avoid an input buffer 66 overflow condition").

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ottesen et al as applied to claims above.

Regarding claim 5 Ottesen et al does not specifically disclose a transfer rate controller wherein the stream has no multiplexed data.

The examiner takes official notice that it is notoriously well known not to transmit auxiliary data during times of trick play. Audio, subtitles, and other non-visual data is not intelligible during fast play, reverse play at any speed, and pause, and is therefore not required by the viewer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to not include auxiliary data in the stream during trick play, and therefore not multiplex the data stream.

Regarding claim 9, Ottesen et al suggest a medium for storing a program and/or data for allowing a computer to carry out all or some functions of all or some means of the transfer rate controller or the decoding system (Col 19, line 46 "Intelligent Set-Top Control System" and Fig 11, item 64 "Set-Top Controller"), but do not specifically disclose that a medium that is able to be processed by a computer.

The examiner takes official notice that modern products that control and/or store large amounts of data are notoriously well known to be processor based and software driven, and that such software is notoriously well known to be stored in a medium such as read-only memory, magnetic or optical disc, or solid state non-volatile memory devices. Software is known to be easily updated, modified, and corrected, and is an economical and convenient way to provide functionality to a processor-based system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a medium for storage of the operating program in the system.

8.   Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ottesen as applied to claims above, and further in view of Blatter (6,584,275).

   Regarding claim 17, Ottesen et al disclose a method of transferring a data

stream (Col 5, line 65- Col 6, line 2 "a multimedia communication system...configured to

communicate multimedia programs to a plurality of set-top control systems 62

concurrently over a communication channel 44"), but do not specifically disclose that

stream is transported over an IEEE 1394 bus.

   Lownes et al teach that the 1394 bus is useful for transferring a multimedia data

stream (Col 3, line 64- Col 4, line 1 "The IEEE 1394 bus is described in a technical

standard IEEE 1394 Standard for a High Performance Serial Bus IEEE STD 1394-1995,

Aug. 30, 1996. This bus includes an isosynchronous data transfer mode and an

asynchronous data transfer mode.").

   As taught by Lownes et al, IEEE 1394 is a recognized standard for transporting

the type of data used by Ottesen et al, and is well known, widely used, and

commercially available. The use of such a recognized transport stream would reduce

development time, and provide compatibility with existing equipment at the user's

location.

   Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify Ottesen et al to specify an IEEE 1394 bus as the stream

transport bus.

   Regarding claim 18, Ottesen et al disclose a method of transferring a data

stream in which the step of receiving includes receiving MPEG transport packets as

analyzed and discussed above, but do not suggest the step of storing includes converting the received MPEG transport packets into a packetized elementary stream (PES).

Lownes et al teach that MPEG transports can be converted into a packetized elementary stream for recording (Col 4, lines 10-15 "The transport decoder 102 converts the received transport packets containing compressed bit-stream data from the communication channel bit stream into compressed video data, which may be, for example, packetized elementary stream (PES) packets according to MPEG-2 standard" and Col 9, lines 37-41 "the VCR control panel...includes a status window 510 and control buttons for rewind, 512; stop, 514; fast forward, 516; play, 518; pause, 520; and record, 532").

As taught by Lownes et al, conversion of an incoming MPEG stream into PES packets for recording is well known, widely used, and commercially available means for providing a signal for recording. Using PES packets shortens development time and provides compatibility with the users existing equipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ottesen to record PES packets.

Allowable Subject Matter

9.   Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 19 and 20, the prior art does not disclose, teach, or suggest a controller or method wherein the interval between packets adjusted by the packet rate adjusting means is a value of remaining time to the start of next frame divided by number of packets not being transferred.

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (703) 305-3464. The examiner can normally be reached on 7:45AM - 5:45PM M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached at (703) 305-4380.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
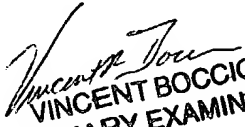
Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

JAF
September 15, 2004

VINCENT BOCCIO
PRIMARY EXAMINER